EXHIBIT 2

IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF DELAWARE

ENZON PHARMACEUTICALS, INC.,

Plaintiff,

- against -

Civil Action No 04-1285 (GMS)

PHOENIX PHARMACOLOGICS, INC.,

Defendant.

9:00 a.m.

August 4, 2005

One Broadway

New York, New York

CONFIDENTIAL

VIDEOTAPED DEPOSITION of DAVID RAY FILPULA, a Witness in the above entitled matter, taken pursuant to Rule 30(b)(6), before Stephen J. Moore, a Registered Professional Reporter, Certified Realtime Reporter, and Notary Public of the State of New York.

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discussions about using higher molecular weight PEGs with ADI, whether we were talking about 35 or 45 or 40, I wouldn't remember that level of detail.

Q These general discussions to which you have referred, did they involve Dr. Clark?

MR. SIEM: Objection to form.

A I'm not certain, but since he was a member of the ADI sourcing team, was invited to all the meetings, contributed to the discussion at the meetings when he attended and was provided with all documents and information pertaining to PEG and ADI, I would think that he would be likely to be included in such discussions.

Q Where did Dr. Clark get the idea of using PEG 40,000 with ADI as referenced in the '738 patent?

MR. SIEM: Objection to form.

A Well, I cannot be a mind reader and be certain in what somebody else was thinking.

I believe that the work that we

conducted in our PEG-ADI program at Enzon showed that the higher molecular weight PEGs performed better and therefore it would teach us as a team that the use of the higher molecular weight PEGs is a good thing.

Q Well, if it was taught to the folks at Enzon the higher molecular weight PEG is a good thing, how come we haven't seen any documents in which that was actually explored?

MR. SIEM: Objection to form.

A In my view we did see such a document in our manuscript, for one example we show that the 12K outperformed the 5K.

Q Well, if it's taught to the team that higher molecular weight is better, wouldn't the logical extension of that be to go even higher than 12?

MR. SIEM: Objection to form.

A I think that that would be something that a scientist would think about and evaluate, at least in his thoughts, and perhaps want to follow-up on in experimentation.

You can't always do every

experiment that you think about, resources are limited.

Q And they were limited at Enzon, right?

MR. SIEM: Objection to form.

A They are limited everywhere.

Q But evaluating higher molecular weight --

MR. LUCCI: Let me strike that.

Q But evaluating PEG-ADI having PEG polymers of molecular weight greater than 12,000 wasn't something that was evaluated at Enzon, was it?

A I can't be sure of that, I already found a listing in one of our manuscripts suggesting that we may have looked at a 24K PEG.

I'm not certain of the total list of compounds that may have been explored to some level in looking at and investigating the properties that PEGylated ADI compounds.

One does not necessarily do a thorough evaluation, meaning both biochemical and cell culture and animal study type data,

one may stop at a preliminary testing where the question is asked how does this particular PEG or linker affect the specific activity of the conjugate, and if time and the cost don't allow us to explore every single compound, we may not be able to go further with every single compound to the more extensive and thorough investigation involving these animal and cell culture models.

Q Dr. Filpula, can you point me to a single document in Enzon's document production to Phoenix where the use of PEG having a molecular weight of 40,000 is discussed in connection with PEGylating ADI?

MR. SIEM: Objection to form.

A In the documents that I reviewed the past few days, I don't recall seeing that specific example.

That doesn't mean there might not be information on that contained in the relative documentation that is part of this litigation.

There is certainly a great deal of work that has been done with 40K PEG at

Enzon on various compounds, therefore exploration of that at Enzon per ADI would not surprise me, I just do not see any specific examples of that contained in the documents that I reviewed the last few days.

Q Is PEG of 40,000 molecular weight -- let me just phrase it differently, are PEGs of molecular weight greater than 24,000 proprietary to Enzon?

MR. SIEM: Objection to form.

A That may depend upon several factors, it would, perhaps, depend upon the linker employed, it may depend upon the design of the PEG, such as whether one uses a branch structure or not.

There may be other factors.

Q Well, the claim here that we were looking at in the '738 patent just talks about polyethylene glycol having a total weight average molecular weight of from about 1,000 to about 40,000.

Now, polyethylene glycol having a total weight average molecular weight of about 40,000 had been in the literature before

1994, hadn't it?

MR. SIEM: Objection to form.

A Again, I would want to carefully examine that point with regard to the date you mentioned, but I think that PEGs of various sizes have been explored in the literature prior to 1994, including ones that are quite large.

Q On the order of -- quite large meaning on the order of 40,000, correct?

A Yes.

Q Just for the record, your answer to my question was yes?

A Yes.

Q Just so we are clear on the record, you are not able to identify for me any discussion at Enzon relating to the use of PEG 40,000 with ADI, is that correct?

MR. SIEM: Objection to form.

A I can't recall specific examples of conversations between particular individuals relating to that specific construction.

But typically at Enzon conversations about modifying proteins with a

wide array of different sizes of PEGs for any protein would be very usual.

Q Now, looking at the remainder of claim 1 in the '738 patent, you see there the portion of claim 1 that appears in column 20, do you see that there begins with the word linking group?

A Yes.

Q And it says, continuing from the prior paragraph, says, "Wherein the linking group is selected from the group consisting of," do you see that language?

A Yes.

Q Now, the first linking group that's listed there is a succinamide?

A Yes.

Q The next one is an amide group, right?

A Yes.

Q Are you aware of any document that has been produced to Phoenix in this litigation that discusses using an amide group to link a PEG molecule to ADI?

MR. SIEM: Objection to form.

A I will have to say that the language of claim 1 is a bit unclear to me in that the linking group could well be an amide.

Typically the succinamide would be a leaving group and in a different formal chemical category from the actual linkage, which could be an amide.

The -- it may be that the XUS linker that we referred to forms an amide linkage, I would have to doublecheck that, however that may also occur with the T PEG.

The SC would generate what is called a carbamate or urethane linkage.

Q Now, you see one of the groups listed there is an ester group?

A Yes.

Q Did you see any reference in the documents that have been produced to Phoenix in this litigation of using an ester group to link a PEG polymer to ADI?

MR. SIEM: Objection to form.

A I don't specifically remember that example. Ester groups are rather common in well-known PEG linkers, so it's something

that could easily be discussed at any time.
Q Well, given that they are well-known, isn't it surprising that you didn't see them mentioned in any documents produced by Enzon?
MR. SIEM: Objection to form, mischaracterizes the witness' testimony.
A Again, the linkers that I recall seeing are ones that I've listed. There were, perhaps, a number of other linkers explored in our PEGylation program.
The ester linkage actually is not regarded as the best strategy to use for PEGylation due to its instability.
Q And the experiments you are referring to talking about the use of the ester linkage is with a molecule different from ADI, correct?
A Yes, the general statement I made is a generalization, not specifically directed to ADI.
Q Now, the next group here is an epoxy group, is there any document that's been produced to Phoenix in this litigation by Enzon

that refers to the use of an epoxy group to link ADI to a PEG polymer?
MR. SIEM: Objection to form.
A I don't specifically recall communication of that, again the epoxy group would be difficult to work with and probably not be a premier choice for PEGylation.
Q Now, the remainder of that portion of claim 1 refers to a carboxyl group, a hydroxyl group, a carbohydrate, a tyrosine group, cysteine group, and a histadine group, do you see that?
A Yes.
Q Are you aware of any documents that Enzon has produced to Phoenix in this litigation that discuss the use of any of those linkers to link ADI to a PEG polymer?
MR. SIEM: Objection to form.
A And again, I'm not sure of the exact wording of that in documents that I have seen, but it would be relevant to one of the compounds that we explored and described in our work, for example the SC PEG compound, the SC linker, while it primarily reacts with lysines,

the primary amines of lysines it's also able to react with cysteines and histadines, and tyrosines.
Q But, Dr. Filpula, this is talking about the use of a succinamide linker as an alternative to a histadine, not together with a histadine, isn't it?
MR. SIEM: Objection to form, calls for a legal conclusion.
A I'm uncertain as to what specifically is referred to here. As I've noted previously, the language is a bit confusing in that there is a description of what typically would be a linkage, such as an amide, and description of what would typically be a linker, such as a succinamide.
Q But if we focus on carboxyl groups, carboxyl groups, hydroxyl groups and carbohydrate groups, you're not aware of any document that Enzon has produced in this litigation, are you, that discusses the use of those groups to link ADI to a PEG polymer, are you?
MR. SIEM: Objection to form.

A I don't recall specific examples of that in the documents that I've looked at recently.
Nonetheless, one could envision ways that you could modify the ADI protein through different linker chemistries such that it could react with these moieties, the carbohydrate and carboxyl and hydroxyl groups, the approaches would be disclosed by various publications.
Q Did Enzon ever link ADI to a PEG polymer using an Ester group, epoxy group, carboxyl group, hydroxyl group, carbohydrate group?
MR. SIEM: Objection to form.
A Again, the ones you listed were.
Q Ester, epoxy, carboxyl, hydroxyl, carbohydrate?
MR. SIEM: Same objection.
A ADI does not have any carbohydrates, that is a bit confusing as to why that was included.
The chemistries for hydroxyl and to some extent carboxyl and certain epoxy would

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be not premier chemistries for this application.

And I don't specifically remember exploration of those, although it's possible that those were included in our programs.

I didn't run across specific mention of that in the documents that I reviewed.

Q So, it's your understanding that Enzon definitely did any work using hydroxyl or epoxy groups to link ADI to a PEG polymer, is that correct?

MR. SIEM: Objection to form, mischaracterizes the witness' testimony.

A Rather I'm saying I don't know, however I've not seen that specific example in the recent documents I've reviewed.

Q Dr. Filpula, do you recall any discussions at Enzon about using as a linker for PEG and ADI any of the ester, epoxy, carboxyl, hydroxyl or carbohydrate groups we have been discussing?

MR. SIEM: Objection to form.

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A I don't specifically recall the discussions about that.

Q Did anyone at Enzon communicate the use of those groups as a linker for PEG and ADI to Dr. Clark?

MR. SIEM: Objection to form.

A I don't recall that.

Q Did Dr. Clark work on those groups as linkers for PEG and ADI when he was at Enzon, and by those groups I mean ester, epoxy, carboxyl, hydroxyl and carbohydrate?

MR. SIEM: Objection to form.

A I'm sorry, could you read that question back?

(The question requested was read back by the reporter.)

A No, I don't recall that at all. Mike wasn't a PEGylation expert. He didn't do PEGylation work at Enzon.

Q What type of work did Dr. Clark do at Enzon?

A Mike was an associate VP, his job was administrative and supervisory.

He, I believe, headed the

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molecular genetics, or possibly it was called the biology department reporting to Rob Schorr who was, I think, V.P. of research.

His responsibilities were not only in PEG-ADI, he worked on at least one other major program as well.

Within the ADI program he was a member of the ADI sourcing team and would have contributed to discussions at those team meetings, and invited to all the meetings, he would have received all the meeting minutes and information about the program, both the PEGylation and the ADI component.

So his job was to serve as a communication link between the ADI sourcing team and senior management, as a top manager he had responsibilities in managing resources, making sure that we had enough people to do the job, enough money, enough equipment.

He also had responsibilities in fostering the relationship between Enzon and Lloyd Old's lab at Ludwig.

Q Now, you're not aware of anyone at Enzon discussing use of ester, epoxy,

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carboxyl, hydroxyl or carbohydrate groups to link PEG and ADI, correct?

MR. SIEM: Objection to form.

A I'm not -- I'm not familiar with using those chemistries, I think I remember them all, for the purpose of PEGylating ADI.

Q So your testimony is you do remember them all for the purpose of PEGylating?

A No, what I said was I do not remember the use of those linkers that you mentioned, the epoxy, the carbohydrate, I think you said carboxyl, hydroxyl, I don't recall work using those linkages specifically for PEGylating ADI.

It may have occurred, but I don't specifically recall that being done.

Q Does Enzon have any idea where Dr. Clark got the idea to use ester, epoxy, carboxyl, hydroxyl or carbohydrate groups to link PEG and ADI?

MR. SIEM: Objection to form.

A Well, again, I can't read somebody else's mind, but the use of linkers

and linkages like this is kind of textbook.
It's, you know, the type of linkages that one uses for a variety of conjugations.
So I mean he could read a textbook and find most of this, I guess, or an article in the literature.
Q The use of ester, epoxy, carboxyl, hydroxyl and carbohydrate groups for linking PEG and ADI isn't proprietary to Enzon, is it?
MR. SIEM: Objection to form.
A That I think, when you say proprietary, that gets into a legal issue, and I can only address factual issues as a research scientist, I am not an attorney.
Q Well, on that basis can you answer my question?
MR. SIEM: Objection to form.
A And again, the question was whether it was proprietary? No, I can't answer that.
Q You don't know whether or not the use of those linkers to link PEG and ADI

was proprietary to Enzon?
A No, I don't know.
Q You mentioned that you could find them in a textbook, though, right?
A Yes, but it's all about timing, when the textbook came out.
Q Could you have found them in a textbook in 1996?
A I'm not certain, perhaps.
Q The use of ADI as a treatment for cancer was in the public domain before Enzon got involved in using ADI, correct?
A I'm not certain of that, but the idea of using arginine deprivation to treat cancers has been around quite a while.
Q Isn't it the case that Takaku published in 1992 on the use of ADI for mycoplasma to treat cancer?
MR. SIEM: Objection to form.
A Again, I don't have the document in front of me, so I don't know how to treat to that.
Q Well when you got involved working with ADI, was it your understanding as

to whether or not Takaku -- you are aware of the publications of Takaku on ADI, correct?
A There were previous publications on ADI to 1996, you've mentioned the years in the early '90s and indeed in the early '90s there were significant publications on ADI.
You mentioned one specific author's name, Takaku, that sounds familiar, but again without seeing the article and refreshing my memory as to his article, I can simply say that there have been publications on the use of ADI in the literature in the early '90s and it was -- there was evidence provided that they had anti-cancer effects.
Q Do you have an understanding as to whether in that early '90s time period it has also been published to put PEG on ADI?
MR. SIEM: Objection to form.
A Yes, there was an article, I'm not sure of the year, that described PEGylation of an ADI and it's anti -- I believe it included some anti-tumor effects, at least in cell culture.
Q Would it be consistent with your

recollection that publication came out in 1993?
A Possibly.
Q How did Enzon get involved initially in using ADI?
A The history behind that even predates me, and I've been with the company a long time.
The founder of the company, the founders of the company, Frank Davis and Abe Abakowski had an interest all along in using PEGylated enzymes to deplete essential amino acids and thereby treat cancers.
One of the enzymes that they worked on, I believe, while they were still in academia at Rutgers was N-arginase, arginase depletes arginine from the blood or from serum or from aqueous solutions for that matter, through a similar but not identical mechanism.
They worked on PEGylating arginase back then. That gradually led to a PEGylation program on pseudomonas ADI and then we have discussed the further evolution to the mycoplasma program.
Q Do you remember anyone at Enzon

expressing skepticism over the use of PEG polymers having molecular weight greater than 12,000 for PEGylating ADI?

A No, I don't recall that.

Q Dr. Filpula, in the '738 patent you have there, if you could turn to the last page of it, in claim 3 there is a reference in the second line to a succinimidyl succinate group, do you see that?

A Yes.

Q Did Enzon use that group to link PEG and ADI?

A It's possible, the succinimidyl succinate group or as we call it the SS group is one that we have used extensively at Enzon over the years, in fact two of our marketed products use that chemistry.

It would be unsurprising to me if we explored that chemistry, I don't specifically recall if we did or not, only that it would be unsurprising.

Q Can you point me to any document in Enzon's document production to Phoenix that discusses the use of the succinimidyl succinate

group to link PEG and ADI?

MR. SIEM: Objection to form.

A As I mentioned, I don't recall seeing specific mention of using the SS linker together with PEGylation of ADI, we would certainly have been extremely well aware of the potential to do so if we wished to for the very reasons I've stated.

The SS linker is okay, we felt that the SC linker has superior features overall and probably chose to focus more of the work on that linker for that reason.

Q Was the SS linker known in the literature prior to 1994?

A Yes, I believe so.

Q There is another linker mentioned on the next line, the succinimidyl succinamide, do you see that there?

A Yes.

Q Are you aware of any work at Enzon to use that linker to link PEG and ADI?

A I don't recall seeing that specific linker in the documents that I reviewed.

Q And you're not aware of any work apart from what's referenced in the documents directed to the use of that linker to link PEG and ADI?

MR. SIEM: Objection to form.

A I don't recall that.

Q Does Enzon know where Dr. Clark got the idea to use the succinimidyl succinate linker to link PEG and ADI?

MR. SIEM: Objection to form.

A Again, I can't read someone else's mind, however given the complete knowledge that Mike had of the enzyme program employing a variety of PEG linkers and the fact that Enzon extensively worked on SS PEG during the two year period that he was there on other projects, I would have to assume that he would have been very well exposed to SS PEG during his employment.

Q Was, the fact that Enzon was using SS PEG is something that was confidential to the company in that time period?

MR. SIEM: Objection to form.

A I believe that the use of SS PEG

on some projects was publicly known.

Q With respect to the succinimidyl succinamide, does Enzon have any idea where Dr. Clark got the idea to use that to link PEG and ADI?

MR. SIEM: Objection to form.

A Again, it would be a somewhat similar answer, the linkers that Enzon used during that period of time were various, Enzon is really or especially then was and today as well, I believe, most especially in the '90s was the place to be for PEGylation.

We were the PEGylation experts.

And I think we are still are, but certainly then there was just no question.

Mike was exposed to the best PEGylation programs anywhere that I know of, and I would guess he would be able to learn more about a variety of linkers, and indeed would be someone would would want to learn more about the very company that he works for.

Q But the fact that Enzon used a variety of linkers wasn't a matter that Enzon kept in confidence, was it?